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BARRIERS IN IMPLEMENTING EFFECTIVE REVERSE LOGISTICS IN INDIAN AUTOMOBILE SECTOR

Swapnil Chauhan [1] | Sh. Bhupender Singh [1] | Sh. R.K. Singh [2]

[1] Department of Mechanical Engineering, YMCA University of Science and Technology, Faridabad.

[2] Department of Operation Management, MDI, Gurugram.

ABSTRACT

In recent years environmental factors result in increasing attention towards the proper disposition of end of life products. Environmental concerns, government regulations, social responsibility and economic factors are some of the driving forces behind the implementation of reverse logistics. Reverse logistics is an important growing trend in automobile sector because of the increase in automobiles at alarming rate in India. As the concept is new for Indian automobile sector, there are barriers in its implementation which need to be addressed for getting effective results.

1. INTRODUCTION

Reverse logistics, defined by Reverse Logistics Executive Council as "the process of moving goods from their typical final destination to another point, for the purpose of capturing value otherwise unavailable, or for the proper disposal of the products". Benefits associated with research logistics leads to the increase in development of this field. Social and environmental sustainability increasingly influence economic policy decisions and can have an impact on economic performance. In such context, consumers and legislations forces industries to consider their responsibility towards environment therefore to consider environmental aspects at different level within the organization. Most developed countries have policy of properly disposition of their waste. US remanufacturing industry are worth $50 billion per year (Corbett CJ and Kleindorfer PR, 2001). In 2015, it is estimated that India had 8.7 million end-of-life vehicles and the number is expected to rise to 21.8 million by 2025 (CPCB). Table 1 clearly shows the growth rate of vehicle. A need was realized to minimize the impact of End of Life vehicles on environment, thus contributing to the protection, preservation and improvement of the quality of the environment and energy conservation.

In this paper we will discuss about the barrier's affecting reverse logistics in automobile sector with respect to Indian scenario.

Table 1: Vehicle sales trend in India

Category	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Passenger vehicles	25,01,542	26,29,839	26,65,015	25,03,509	26,01,236	27,89,678
Commercial vehicles	6,84,905	8,09,499	7,93,211	6,32,851	6,14,948	6,85,704
Three wheelers	5,26,024	5,13,281	5,38,290	4,80,085	5,32,626	5,38,092
Two wheelers	1,17,68,910	1,34,09,150	1,37,97,185	1,48,06,778	1,59,75,561	1,64,55,911
Grand total	1,54,81,381	1,73,61,769	1,77,93,701	1,84,23,223	1,97,24,371	2,04,69,385

Source: SIAM

2. BARRIER'S IN IMPLEMENTING REVERSE LOGISTICS

Complexity in reverse logistics needs involvement from top management. For a successful reverse logistics system companies management commitment is a prerequisite. Lack in management commitment, lack of return policies and unclear assignment of human resource result in reverse logistics issues (Verstrepen et al., 2007).

2.1 Lack of awareness about reverse logistics

A chief barrier of reverse logistics seen in Indian automobile supply chain is lack of awareness about the benefits of reverse logistics. Even if companies knew about it, giving relative unimportance to reverse logistics was seen as the largest barrier to reverse logistics (D.S Rogers and Tibben-Lembke. 1998). The reverse logistics can lead to economic benefits by the recovery of the returned products for reuse, remanufacturing, recycling, or a combination of these options for adding value to the product. The implementation of the reverse logistics leads to direct benefits to the environment, too. Thus, the lack of the awareness of these benefits is a major barrier to reverse logistics.

2.2 Lack of government regulation

In India at present there is no government regulation, policy or law that bound companies to take back their end of life vehicles and dispose them properly. Companies are not responsible for their products just like in EU. The National Environmental Policy 2006 (NEP) focuses on sustainable development and need to recover useful material from waste. That policy is focused on all industries and is not centrally focused on automotive sector. As per the EU Directive 2000/53/EC (European Council report) responsibility of manufacturer extends to the post-consumer stage of the vehicle. Recently CPCB proposes “Shared Responsibility” scheme for the processing of ELVs in environmentally friendly manner.

2.3 Market structure

Extending responsibility of end of life vehicles to producers is unviable in an emerging market like in India, where the industry is not developed to the maturity level. Hence there is an unorganized sector in India working in this field unscientifically. The unorganized sector has its own problems like lack of resources, financial constraints, proper technical knowledge, working conditions and the industry is adversely affecting the environment and workers health. Currently there are no regulations to monitor these markets and take account of the recovered scrap, thus necessitating a government policy which recognizes scrap generation from auto recycling as a sustainable, environment friendly industry. Srivastava S.K 2008, high capital investment and underdeveloped technologies are bottlenecks in remanufacturing industry.

2.4 Lack of proper training

A significant barrier to sensible reverse logistics is lack of personnel resources (D.S Rogers and Tibben-Lembke. 1998). Lack of training and education could be a major challenge to reverse logistics. Education and training are prime requirements for achieving success in any organization. The need for training on reverse logistics extends throughout the company and reaches up and downstream. The training should be provided about new emerging technologies, new developments within the market so that changes can bring within the organization and reverse supply chain can be organized together with forward supply chain.

2.5 Problems with product quality

Another important barrier affecting reverse logistics is the condition of the quality of the end-of-use/ end-of-life returned products. The product quality is not uniform in reverse logistics compared to the forward logistics where the product quality is uniform (Tibben-Lembke R.S. and D.S. Rogers, 2002). Thierry M. et al. 1995 opine that the overall quality targets for remanufactured/recycled products must be, at the least, equivalent to the virgin products. Customers usually expect the high level of quality of product from the manufacturer. Along with this there is no defined term for what should be called as an end of life vehicle. Recently National Green Tribunal (NGT) orders to ban diesel vehicles that are at least 10 years old and petrol vehicles that are 15 years old in national capital Delhi (CPCB). In order to have uniformity all over the country there must be a defined life cycle of a vehicle, so that it will be easy for organizations to use that data for further operations.

3. CONCLUSIONS

With reverse logistics being new concept for Indian automobile sector, there is a need to study the factors affecting implementation of this concept and to get maximum result out of this. Company policies and their top management involvement are considered essential to bring changes within the organization.

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